

CLAIMS:

1. A process comprising:

- 5 -determining that a user in a first geographic zone, which first geographic zone has a first communications service that supports provision of a journey-related information to the user, is at least likely to leave the first geographic zone and enter a second geographic zone, which second geographic zone does not have the first communications service;
- downloading to the user at least some journey-related information
- 10 regarding the second geographic zone while the user is at least proximal to an entrance boundary for the second geographic zone.

2. The process of claim 1 wherein downloading comprises downloading from a database to the user.

3. The process of claim 2 wherein downloading from a database to the user at least some journey related information regarding the second geographic zone includes downloading all journey-related information regarding the second geographic zone as is contained in the database.

4. The process of claim 2 wherein downloading from a database to the user at least some journey related information regarding the second geographic zone includes downloading only a portion of the journey-related information regarding the second geographic zone as is contained in the database.

5

5. The process of claim 4 wherein downloading only a portion of the journey related information regarding the second geographic zone as is contained in the database includes providing information that corresponds to an anticipated journey path for the user.

10

6. The process of claim 5 and further including determining the anticipated journey path for the user.

7. The process of claim 6 wherein determining the anticipated journey path for the user includes accessing destination point information as previously provided by the user.

8. The process of claim 6 wherein determining the anticipated journey path for the user includes estimating the anticipated journey path by referencing historical information regarding the user's travels.

9. The process of claim 4 wherein downloading only a portion of the journey related information regarding the second geographic zone as is contained in the database includes downloading only a portion of the journey related information regarding the second geographic zone as dynamically selected for the user.

5

10. The process of claim 9 wherein downloading only a portion of the journey related information regarding the second geographic zone as dynamically selected for the user includes downloading only a portion of the journey related information regarding the second geographic zone as dynamically selected by the user at the time of facilitating the downloading.

10

11. The process of claim 9 wherein downloading only a portion of the journey related information regarding the second geographic zone as dynamically selected for the user includes downloading only a portion of the journey related information regarding the second geographic zone as dynamically selected for the user based upon previously stored preferences that are at least partially specific to the user.

15

12. The process of claim 11 wherein downloading includes receiving the previously stored preferences from the user.

20

13. The process of claim 11 wherein downloading includes receiving the previously stored preferences from a database that is remote from the user.

14. The process of claim 11 wherein downloading includes receiving part of the previously stored preferences from the user and part of the previously stored preferences from a database that is remote from the user.

5 15. The process of claim 4 wherein downloading only a portion of the journey related information regarding the second geographic zone as is contained in the database includes downloading at least weather forecast information for at least a part of the second geographic zone.

10 16. The process of claim 15 wherein downloading at least weather forecast information for at least a part of the second geographic zone includes downloading at least weather forecast information that corresponds to an anticipated journey path for the user.

15 17. The process of claim 1 wherein downloading comprises wirelessly downloading to the user at least a portion of journey-related information regarding the second geographic zone while the user is at least proximal to an entrance boundary for the second geographic zone.

20

5 19. The process of claim 17 wherein downloading further comprises
completing the downloading to the user of all remaining journey-related information
regarding the second geographic zone while the user is within the second geographic
zone and distal to the entrance boundary.

21. The process of claim 20 wherein completing the downloading using
15 a second communications service includes completing the downloading using a second
communications service comprising a cellular telephony system.

22. The process of claim 1 wherein downloading comprises
downloading to the user at least a portion of journey-related information regarding the
20 second geographic zone while the user is at least proximal to an entrance boundary for
the second geographic zone using a physical interconnection.

23. The process of claim 22 wherein using a physical interconnection includes using a portable memory device.

24. The process of claim 23 wherein using a portable memory device
5 includes using an optically encoded memory device.

25. The process of claim 23 wherein using a portable memory device includes using an electro-magnetically encoded memory device.

26. The process of claim 23 wherein using a portable memory device
10 includes dispensing the portable memory device to the user from a dispensing station.

27. The process of claim 26 wherein dispensing the portable memory
device to the user from a dispensing station includes dynamically placing at least part
15 of the journey-related information in the portable memory device for the user.

28. The process of claim 22 wherein using a physical interconnection includes using a data conduit.

29. The process of claim 28 wherein using a data conduit includes using
20 an optical conduit.

30. The process of claim 28 wherein using a data conduit includes using an electrical signal conduit.

31. The process of claim 1 and further comprising storing the journey-related information regarding the second geographic zone in a memory.

32. The process of claim 31 wherein storing the journey-related information regarding the second geographic zone in a memory includes storing the journey-related information regarding the second geographic zone in a cache memory.

33. The process of claim 31 and further comprising automatically removing at least portions of the journey-related information regarding the second geographic zone as the user travels through the second geographic zone.

34. The process of claim 33 wherein automatically removing at least portions of the journey-related information regarding the second geographic zone as the user travels through the second geographic zone includes automatically removing portions of the journey-related information regarding the second geographic zone that correspond to geographic locations that the user has at least reached.

35. The process of claim 33 wherein:

- downloading includes downloading to the user at least some journey-related information regarding the second geographic zone wherein at least some of the journey-related information includes a corresponding data-expiration time; and

5 - automatically removing at least portions of the journey-related information
regarding the second geographic zone as the user travels through the second
geographic zone includes automatically removing portions of the journey-related
information regarding the second geographic zone for which the data-expiration time
has expired.

10

36. The process of claim 1 wherein downloading comprises downloading to the user pursuant to user-based downloading criteria.

37. The process of claim 36 wherein downloading to the user pursuant
15 to user-based downloading criteria includes downloading to the user pursuant to user-
based downloading criteria that includes encryption information.

38. The process of claim 37 and wherein downloading to the user
pursuant to user-based downloading criteria that includes encryption information
20 includes downloading to the user pursuant to user-based downloading criteria that
includes encryption information comprising an encryption key.

39. The process of claim 36 wherein downloading to the user pursuant to the user-based downloading criteria includes downloading to the user pursuant to user-based downloading criteria that includes at least one data format specification.

5

40. The process of claim 36 wherein downloading to the user pursuant to the user-based downloading criteria includes downloading to the user pursuant to user-based downloading criteria that includes data compression information.

10

41. The process of claim 40 wherein downloading to the user pursuant to user-based downloading criteria that includes data compression information includes downloading to the user pursuant to user-based downloading criteria that includes data compression information comprising a specific type of data compression.

15

42. The process of claim 36 wherein downloading to the user pursuant to the user-based downloading criteria includes downloading to the user pursuant to user-based downloading criteria that includes at least one data presentation specification.

20

43. The process of claim 42 wherein downloading to the user pursuant to user-based downloading criteria that includes at least one data presentation specification includes downloading to the user pursuant to user-based downloading criteria that includes at least one data presentation specification specifying at least one visual display of information.

44. The process of claim 43 wherein downloading to the user pursuant to user-based downloading criteria that includes at least one data presentation specification specifying at least one visual display of information includes downloading to the user pursuant to user-based downloading criteria that includes at least one data presentation specification specifying at least one textual display of information.

45. The process of claim 43 wherein downloading to the user pursuant to user-based downloading criteria that includes at least one data presentation specification specifying at least one visual display of information includes downloading to the user pursuant to user-based downloading criteria that includes at least one data presentation specification specifying at least one graphic display of information.

20 46. The process of claim 42 and wherein downloading to the user
pursuant to user-based downloading criteria that includes at least one data presentation
specification includes downloading to the user pursuant to user-based downloading

criteria that includes at least one data presentation specification specifying at least one audible conveyance of information.

47. The process of claim 36 wherein downloading to the user pursuant
5 to user-based downloading criteria includes compressing information to be transmitted to the user as a function, at least in part, of at least one of the user's processing speed, memory size, and vehicle speed.

48. The process of claim 1 wherein downloading to the user at least
10 some journey-related information regarding the second geographic zone while the user is at least proximal to an entrance boundary for the second geographic zone includes downloading to the user at least some journey-related information regarding the second geographic zone that has been obtained from other travelers journeying from the second geographic zone.

15

49. The process of claim 1 wherein determining that a user in a first geographic zone is at least likely to leave the first geographic zone and enter a second geographic zone includes detecting that the user has previously passed at least one predetermined geographic location.

20 50. The process of claim 49 wherein detecting that the user has previously passed at least one predetermined geographic location includes detecting that the user has previously passed at least two predetermined geographic locations.

51. The process of claim 49 wherein detecting that the user has previously passed at least one predetermined geographic location includes detecting that the user has previously passed the at least one predetermined geographic location within a predetermined period of time.

52. The process of claim 49 wherein detecting that the user has previously passed at least one predetermined geographic location includes automatically accessing a navigation device as used by the user.

53. The process of claim 52 wherein accessing a navigation device as used by the user includes automatically accessing a global positioning system navigation device as used by the user.

54. The process of claim 52 wherein accessing a navigation device as used by the user includes automatically accessing a dead reckoning navigation device as used by the user.

55. The process of claim 1 and further comprising up-loading at least some user information.

56. The process of claim 55 wherein up-loading at least some user

information includes uploading at least an intended destination for the user.

57. The process of claim 55 wherein up-loading at least some user information includes uploading at least an estimated time at when the user enters the
- 5 second geographic zone.

58. The process of claim 55 wherein up-loading at least some user information includes uploading at least an intended travel route for the user.

- 10 59. The process of claim 55 wherein up-loading at least some user information includes uploading at least a wireless telephonic contact number for the user.

60. An apparatus comprising:

- determining means for determining that a user in a first geographic zone, which first geographic zone has a first communications service that supports provision of a journey-related information to the user, is at least likely to leave the first

5 geographic zone and enter a second geographic zone, which second geographic zone does not have the first communications service; and

- downloading means for downloading to the user at least some journey-related information regarding the second geographic zone while the user is at least proximal to an entrance boundary for the second geographic zone.

10

61. The apparatus of claim 60 wherein the downloading means includes means for downloading the at least some journey-related information from a database to the user.

15

62. The apparatus of claim 60 wherein the downloading means includes means for wirelessly downloading to the user at least a portion of journey-related information regarding the second geographic zone while the user is at least proximal to an entrance boundary for the second geographic zone.

20

63. The apparatus of claim 60 wherein the downloading means includes physical connection means for downloading to the user at least a portion of the journey-related information regarding the second geographic zone while the user is at least proximal to an entrance boundary for the second geographic zone.

64. The apparatus of claim 63 wherein the physical connection means includes portable memory means for retaining at least some of the information.

65. The apparatus of claim 64 wherein the portable memory means includes at least an optically encoded memory device.

66. The apparatus of claim 64 wherein the portable memory means includes at least an electro-magnetically encoded memory device.

67. The apparatus of claim 63 wherein the physical connection means includes a data conduit.

68. The apparatus of claim 60 wherein the downloading means includes means for downloading the journey-related information to the user pursuant to user-based downloading criteria.

69. The apparatus of claim 68 wherein the user-based downloading criteria includes at least one of encryption information, data format specifications, data compression specifications, and data presentation specifications.

5

70. The apparatus of claim 60 and further comprising memory means operably coupled to the means for downloading for storing at least a part of the journey-related information regarding the second geographic zone.

10

71. A method to provide a terrestrial-based vehicle user, which user uses wirelessly transmitted journey-related information when traveling through a first geographic zone having at least short-range roadside transmitters that transmit journey-related information compatibly with an information service, with journey-related information regarding a second geographic zone that has at least a considerably reduced number of the short-range roadside transmitters that are operable, comprising the steps of:

- determining that the user is at least likely in the near future to enter the second geographic zone;

- downloading to the user at least some journey-related information regarding the second geographic zone while the user is at least proximal to an entrance boundary for the second geographic zone to provide downloaded journey-related information;

- using at least some of the downloaded journey-related information while traveling through the second geographic zone.

APPARATUS AND METHOD FOR DOWNLOADING JOURNEY- RELATED INFORMATION

5 Vehicles (106) are equipped with two-way communication units (401) that
communicate with roadside (114) and vehicular mounted two-way communication
units to receive and/or exchange journey-related information. When approaching a
geographic zone that does not support such services, a given vehicle (106) can receive
at least a partial download of journey-related information concerning the second
10 geographic zone (102) while still proximal to the entry border (107) for that zone
(102). The download can be implemented wirelessly, through hard physical contact, or
both. The download may also be at least partially concluded while traveling within the
second geographic zone (102) through use of a second non-compatible wireless
service such as wireless telephony.